

# 9<sup>th</sup> Edition Stretch Code Modeling Analysis

2000 sq.ft. 3 BR Single Family Townhome - Propane Heat  
Worcester, MA



## HERS Index (ERI)

Target	55
Example Base	67
Example Stretch	55

## Costs and Benefits to Meet Stretch Code

COSTS		BENEFITS	NET	
BUILDER	Adjustments + HERS Rater Fee		Utility Rebates <sup>1</sup>	
	+\$(2,957)		-\$1,504	
HOMEBUYER	Change to Downpayment <sup>3</sup>	Change to Annual Mortgage Payment <sup>3</sup>	Estimated Reduced Energy Cost per Year <sup>2</sup>	Year 1 Cash Flow
	+\$ (145)	+\$ (115)	-\$428	\$167
				Year 2+ Cash Flow
				\$312

1 – Incentives are determined using the Blended Savings Approach calculator. Savings compared to MA reference home.

BSA Incentive = \$0.35 \* kWh savings + \$35 \* MMBtu savings + \$3000 \* 0.xx percent savings (single family home)

2 – Energy costs are based on 19 cents/kWh, \$0.97/therm, \$2.88 gal propane, \$2.58 gal oil. Savings are compared with Base Code home

3 – 30-year mortgage assumes 10% down payment at 4% APR



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## Breakdown of Construction Costs to Meet Stretch Code

FEATURE	Base Code	Stretch Code	Construction Cost
HERS RATING	67	55	\$500
WINDOWS (U-VALUE/SHGC)	.30/.30	.27/.30	\$363
HEATING	92% propane furnace	97% propane furnace	\$723
COOLING	13 SEER	15 SEER	\$392
DHW	0.62 EF 40 Gallon tank Propane	0.97 EF Tankless Propane	\$779
DUCT LEAKAGE TO OUTSIDE	4 CFM25 / 100 CFA	2 CFM25 / 100 CFA	\$200
AIR INFILTRATION	3.0 ACH50	<i>No change required</i>	\$0
HIGH EFFICACY LIGHTING	100% CFL	<i>No change required</i>	\$0
FOUNDATION	Unconditioned, uninsulated basement	<i>No change required</i>	\$0
FLOOR	R38 fiberglass Grade 1	<i>No change required</i>	\$0
WALLS	R21 fiberglass Grade 1	<i>No change required</i>	\$0
CEILING – FLAT	R-50 blown in cellulose	<i>No change required</i>	\$0
<b>TOTAL</b>			<b>\$2,957</b>